Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of selecting a restoration path in a mesh telecommunication network comprising the steps of:

sending a first message along a service path to the destination node;

receiving a second message from the destination node containing an array representing a restoration link capacity needed on each link over possible failures of the service path, wherein link information used to compute the array is distributed among a plurality of nodes in the network along a path of the second message;

using the array to select a restoration path through the network to the destination node; and

reserving resources for the restoration path in the network.

2. (Original) The invention of claim 1 wherein the link information distributed among the plurality of nodes comprises a matrix representing a restoration link capacity needed on a link when a possible failure occurs.

3. (Original) The invention of claim 2 wherein the restoration link capacity on a link may be shared by non-simultaneous failures.

4. (Original) The invention of claim 3 further comprising the step of sending a third message to update the link information distributed among the plurality of nodes.

5. (Original) The invention of claim 4 wherein the resources for the restoration path are reserved by sending a fourth message along the restoration path to the destination node in the network.

6. (Original) The invention of claim 5 wherein the service path is setup by nodes along the service path in the network as the first message traverses each of the nodes along the service path.

7. (Original) The invention of claim 6 wherein the nodes in the network are cross-connects.

8. (Original) The invention of claim 7 wherein the nodes in the network are optical cross-connects.

9. (Original) The invention of claim 8 wherein possible failures are defined by shared risk link groups.

10. (Original) The invention of claim 9 wherein rows of the matrix representing restoration link capacity are stored in master nodes of shared risk link groups.

11. (Original) The invention of claim 10 wherein columns of the matrix representing restoration link capacity are stored in master nodes of links in the network.

12 – 19. (Cancelled)